



THERMAL SECURITY
homelandsecuritymilitaryindustrial



thermal —————
professionals

MILITARY SECURITY



CRITICAL INFRASTRUCTURES



BORDER CONTROL



AIRPORT SECURITY



COASTAL SECURITY



Advanced electro optical systems and solutions

Optronic > MWIR, LWIR, SWIR

Day Night > Long distance

Radars > directional and omnidirectional

Positioning systems > Stabilized, non stabilized

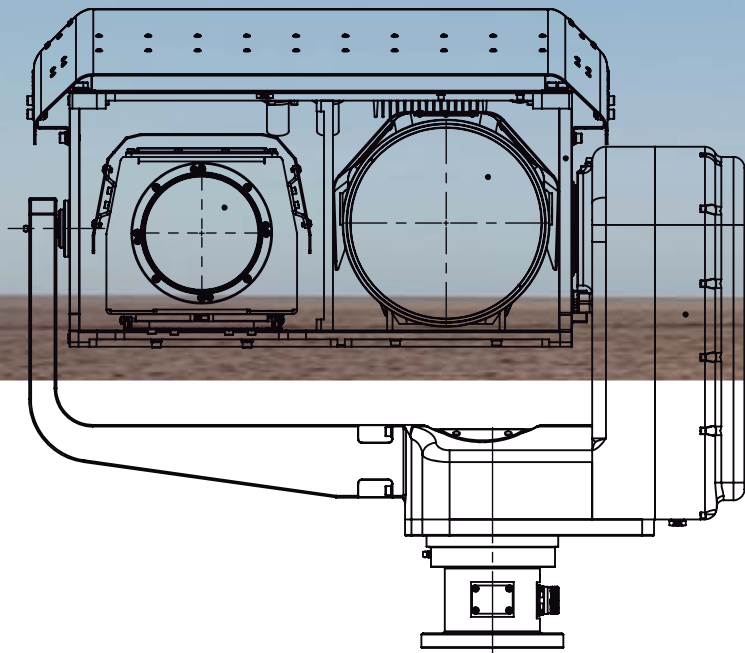
Long distance laser illumination

Auto-tracker

LRF

GPS, AIS, VTS

C2 Command and Control



Land



Sea



Air

INDEX

LWIR THERMAL FIXED PROFESSIONAL

LWIR THERMAL SINGLE AND MULTI SENSOR WITH POSITIONING

LWIR ATEX THERMAL SINGLE AND MULTI SENSOR

LWIR THERMAL MARINE ADVANCED LINE

LWIR THERMAL VEHICLE DETECTORS

LWIR THERMAL BINOCULARS AND MONOCULARS

MWIR THERMAL COOLED SINGLE AND MULTI SENSOR SYSTEMS FOR LAND APPLICATIONS

MWIR / LWIR SINGLE AND MULTISENSORS FOR MARINE APPLICATIONS

LWIR RCWS, SWIR LONG RANGE AND HD SURVEILLANCE CAMERAS

REMOTE LENS CLEANING SYSTEM AND MULTISENSOR CONTROLLER

PROFESSIONAL POSITIONING SYSTEMS + STABILIZATION

LASER RANGE FINDERS

SURVEILLANCE GROUND RADARS AND COASTAL SURVEILLANCE RADARS



INDEX

MILITARY DRONE JAMMERS AND SOLUTIONS

NETWORK AND ANALOGUE RECORDERS

C2 COMMAND AND CONTROL PLATFORM

VMS CONTROL SOFTWARE, VIDEO ANALYTICS & FOV CALCULATOR

LENS DETECTION / RECOGNITION / IDENTIFICATION RANGE DISTANCES FOR LWIR SYSTEMS & RADARS



Get the best image detail in challenging imaging environments with the Tanz TCIB Series thermal network camera. Tanz thermal cameras sets the industry standard for high-quality thermal security cameras.

Ideal for perimeter protection applications, capable of replacing multiple visible cameras and any additional lighting and infrastructure needed to support them.

Select different resolutions from 384x288, 640x480, 1024x768 high definition thermal image. Best performance in uncool systems and a wide range of HD lenses from 4.8mm. up to 300mm.



TCIB1 Series Thermal network cameras

Resolution: 384x288, 640x480, 1024x768
Sensor type: Amorphous Silicon
Wavelength: 8-14 μ m.
NETD Sensitivity: <40mk/f.1.0, 50Hz, 300K
Pixel pitch: 17 μ m.
Frames/Second: 30fps.
Video compression: H.264, Mjpeg, MPEG4
Video output: Digital, Analogue

Bitrate: 196Kbps - 45Mbps.
Onvif 2.5, Profile S
Network: Giga Ethernet
Alarm I/O, RS485
Power: 12vDC, POE
Motion detection
Temperature reading and alarms
Radiometric models
I/O 2/2



For outdoor applications
single or dual sensor



TCIB3 Series Thermal bullet cameras

Resolution: 384x288, 640x480
Sensor type: Amorphous Silicon
Wavelength: 8-14 μ m.
NETD Sensitivity: <40mk/f.1.0, 50Hz, 300K
Pixel pitch: 17 μ m.
Frames/Second: 30fps.
Video compression: H.264, Mjpeg, MPEG4
Video output: Digital, Analogue
Temperature measurement/Radiometric models
Temperature alarms in 10 areas
300 ROI

Bitrate: 196Kbps - 45Mbps.
Onvif 2.4, Profile S
10/100 Ethernet
Alarm I/O, RS485
Power: 12vDC, POE
Motion detection
Temperature alarms





TCIS1 Series Thermal cameras

For TCIB11/TCIB12/TCIB13
 Pan range: 360° endless
 Tilt range: -90°/40°
 Max. pan speed: 120°/Sec.
 Max tilt speed: 40°/Sec.
 Min. P/T speed: 0,025°/Sec.
 Preset accuracy: $\pm 0,1^\circ$
 Presets: 319
 Wiper, heater, glass defroster, fan
 Water proof: IP66
 Salt resistant
 Onvif 2.5, Profile S
 Inc. heavy duty aluminum casting bracket
 * Suitable for lenses up to 75mm.

TCIS21 Series Thermal cameras

For TCIB11/TCIB12/TCIB13
 Pan range: 360° endless
 Tilt range: -90°/40°
 Max. pan speed: 120°/Sec.
 Max tilt speed: 40°/Sec.
 Min. P/T speed: 0,025°/Sec.
 Preset accuracy: $\pm 0,1^\circ$
 Presets: 319
 Wiper, heater, fan
 Water proof: IP66
 Onvif 2.5, Profile S
 * Suitable for lenses up to 300mm.



TCID1 Series Thermal cameras

For TCIB11/TCIB12/TCIB13
 Pan range: 360° endless
 Tilt range: -90°/40°
 Max. pan speed: 120°/Sec.
 Max tilt speed: 40°/Sec.
 Min. P/T speed: 0,025°/Sec.
 Preset accuracy: $\pm 0,1^\circ$
 Presets: 319
 Wiper, heater, glass defroster, fan
 Water proof: IP66
 Salt resistant
 Day/Night camera: 2mp. Starlight / 5mp.
 Zoom: 4,3-129mm. or 10-260mm.
 Onvif 2.5, Profile S
 Inc. heavy duty aluminum casting bracket
 * Suitable for lenses up to 50mm.

TCID2 Series Thermal cameras

For TCIB11/TCIB12/TCIB13
 Pan range: 360° endless
 Tilt range: -90°/40°
 Max. pan speed: 120°/Sec.
 Max tilt speed: 40°/Sec.
 Min. P/T speed: 0,025°/Sec.
 Preset accuracy: $\pm 0,1^\circ$
 Presets: 319
 Wiper, heater, glass defroster, fan
 Water proof: IP66
 Day/Night camera: 2mp. Starlight / 5mp.
 Zoom: 4,3-129mm.
 Onvif 2.5, Profile S
 * Suitable for lenses up to 300mm.
 Optional D/N zoom 10-260mm. or 12.5-775mm.





F40 ATEX explosion proof fix housing

Suitable for TCIB1 thermal box cameras
Grid for thermal camera
Germanium window size Ø80
Casting Ex structure without welding
IP67 protection level
Electro-polished AISI 316L stainless steel

Cable outlet 1(NPT 3/4")
EX Certificates IECEx / ATEX / NEPSI
Ex d IIC T6 Gb, Ex tb IIIC T85°C Db
Zone 1,2(Gas, Vapor) Zone 21,22(Dust)



PT40 ATEX explosion proof pan/tilt housing

Suitable for TCIB1 thermal box cameras
Grid for thermal camera
Germanium window size Ø80
Casting Ex structure without welding
IP67 protection level
Electro-polished AISI 316L stainless steel
Pan/tilt housing

Cable outlet 1(NPT 3/4")
EX Certificates IECEx / ATEX / NEPSI
Ex d IIC T6 Gb, Ex tb IIIC T85°C Db
Zone 1,2(Gas, Vapor) Zone 21,22(Dust)



PTZR ATEX explosion proof pan/tilt housing

Suitable for TCIB1 thermal box cameras
Day/night zoom camera
Grid for thermal camera
Germanium window size Ø80
Casting Ex structure without welding
IP67 protection level
Electro-polished AISI 316L stainless steel
Pan/tilt housing

Cable outlet 1(NPT 3/4")
EX Certificates IECEx / ATEX / NEPSI
Ex d IIC T6 Gb, Ex tb IIIC T85°C Db
Zone 1,2(Gas, Vapor) Zone 21,22(Dust)





TCIG1 / TCIG2 Thermal vehicle cameras

Resolution: 384x288, 640x480
Sensor type: Amorphous Silicon
Wavelength: 8-14 μ m.
Pixel pitch: 17 μ m.
NETD Sensitivity: <40mk/f.1.0, 50Hz, 300K
Frames/Second: 50/60fps.
IP67 water proof
Shock proof
Lens defroster
Pedestrian detection software (Optional)
Video output: Digital, Analogue
8" Industrial grade monitor with sunhood
Wide range working temperature: -25/80°C.



TCIGP1 / TCIGP2 Thermal PT vehicle cameras

Resolution: 384x288, 640x480
Sensor type: Amorphous Silicon
Wavelength: 8-14 μ m.
Pixel pitch: 17 μ m.
NETD Sensitivity: <40mk/f.1.0, 50Hz, 300K
Frames/Second: 50/60fps.
IP66 water proof
Shock proof
Lens defroster
Pan/tilt unit
RS485 Joystick
Video output: Digital, Analogue
8" Industrial grade monitor with sunhood
Wide range working temperature: -25/80°C.

* Available athermal lenses: 8, 19, 25, 35mm.



TBM12 Series LWIR Thermal binoculars



Resolution: 640x480
 Sensor type: Vanadium oxide
 Wavelength: 8-14 μ m.
 Pixel pitch: 17 μ m.
 NETD Sensitivity: <50mk/f.1.0, 50Hz, 300K
 75/100mm. motorized focus
 IP66 water proof
 Shock proof
 OLED/LCOS display
 Quick start-up
 High quality image
 >5 hour working time/battery
 Local recording video/snapshot

TBM12 Series LRF LWIR Thermal binoculars



Resolution: 640x480
 Sensor type: Vanadium oxide
 Wavelength: 8-14 μ m.
 Pixel pitch: 17 μ m.
 NETD Sensitivity: <50mk/f.1.0, 50Hz, 300K
 100mm. motorized focus
 GPS / GLONASS
 LRF 5Km.
 IP66 water proof
 Shock proof
 OLED display
 Quick start-up
 High quality image
 >5 hour working time/battery
 Local recording video/snapshot

Model	Resolution	FPA	Pitch	Lens	Focus	Storage	LRF	GPS	Display
TBM12MCSNO	640x480	VOx	17 μ m.	100mm.	Manual	Yes	No	No	LCOS
TBM12RBONO	640x480	VOx	17 μ m.	75mm.	Motorized	Yes	No	No	OLED
TBM12RCONO	640x480	VOx	17 μ m.	100mm.	Motorized	Yes	No	No	OLED
TBM12RCOL5	640x480	VOx	17 μ m.	100mm.	Motorized	Yes	5Km.	Yes	OLED

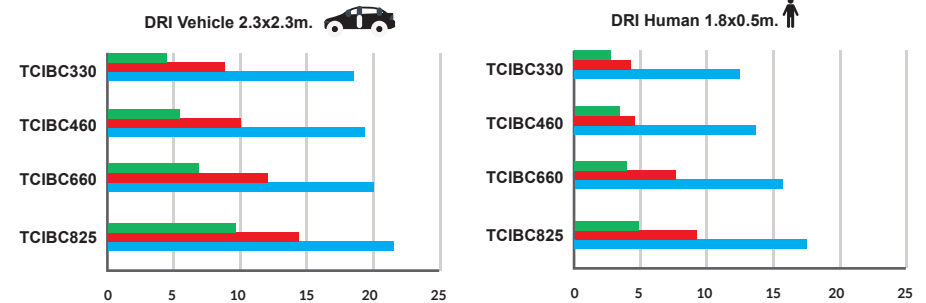
MWIR THERMAL COOLED SINGLE AND MULTI SENSOR SYSTEMS FOR LAND APPLICATIONS



TCIBC Series MWIR thermal cameras

Type: MWIR 640x512 XBn FPA (HOT InSb)
Spectral range: 3,6-4,2μm.
Pixel pitch: 15μm.
Continuous optical/digital zoom: 22X / 16X
Focus: Autofocus or manual (remote)
Image stabilization: Yes
Dynamic range enhancement: Yes
MTBF Inc. cooler: 22,200 hours.
Power/consumption: 28vDC. / 35-120Watt.
Automatic window defroster: Yes
NUC: Built-in optical NUC
Video output: PAL/NTSC, H.264, ONVIF
Control: Ethernet, RS422
Waterproof: IP66 according to MIL810

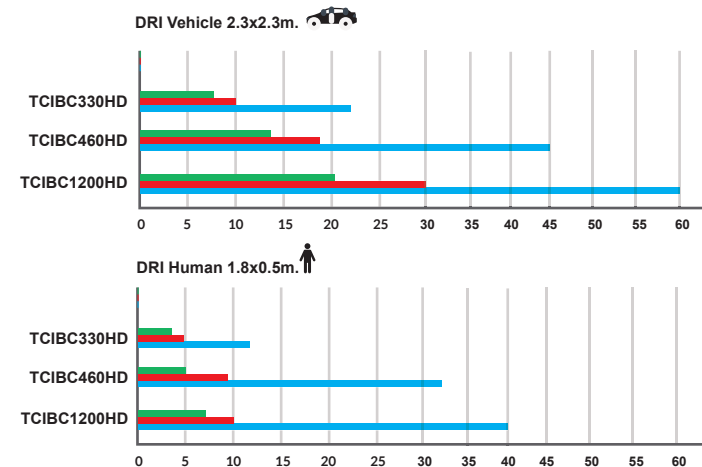
TCIBC	TCIBC330	TCIBC460	TCIBC660	TCIBC825
Lens	15-330mm.	25-460mm.	30-660mm.	40-825mm.
FOV(HxV)	1.66x1.33-35.5x28.7°	1.19x0.95/21.7x17.5°	0.83x0.66/18.2x18.6°	0.66x0.53/13x11°
IFOV	0.0453-0.99mrad.	0.0325-0.59mrad.	0.0226-0.49mrad.	0.018-0.37mrad.
Sensitivity	23mK.	23mK.	23mK.	23mK.
Weight	10Kg.	11Kg.	12Kg.	13Kg.
Size	520x220x210mm.	530x240x230mm.	540x250x240mm.	550x250x240mm.



TCIBC/HD Series MWIR thermal cameras

Type: MWIR 1280x1024 XBn FPA (HOT InSb)
Spectral range: 3,6-4,2μm.
Pixel pitch: 10μm.
Continuous optical/digital zoom: 22X / 16X
Focus: Autofocus or manual (remote)
Image stabilization: Yes
Dynamic range enhancement: Yes
MTBF Inc. cooler: 20,200 hours.
Power/consumption: 28vDC. / 35-120Watt.
Automatic window defroster: Yes
NUC: Built-in optical NUC
Video output: PAL/NTSC, H.264, ONVIF
Control: Ethernet, RS422
Waterproof: IP66 according to MIL810

TCIBC/HD	TCIBC330HD	TCIBC460HD	TCIBC1200HD
Lens	15-330mm.	25-460mm.	57-1200mm.
FOV(HxV)	2.22x1.25/46.2x37.7°	0.81x0.65/10.4x8.36°	0.61/12.8°
IFOV	0.0303-0.66mrad.	0.011-0.14mrad.	0.011-0.14mrad.
Sensitivity	25mK.	25mK.	25mK.
Weight	13Kg.	14.5Kg.	20Kg.
Size	520x220x210mm.	530x240x230mm.	610x320x315mm.



TCIBC/SLX MWIR Series thermal cameras



Type: MWIR 640x512/HD1280x720 XBn FPA (HOT InSb)

Spectral range: 3-5 μ m.

Pixel pitch: 15 μ m.

Sensitivity: 17mK.

Lens: 15-825mm.

FOV: 24X19,2-1,8X1,44°

NUC: User selectable 1,2,3 point NUC

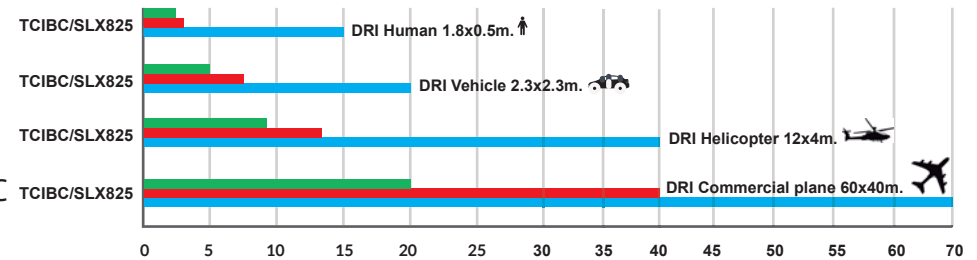
User control: RS422

Video: 50/60Hz.

Optional: 16bit uniformity corrected
dynamic range or 8 bit video

MTBF: >22,000 hours

Environmental: DEFSTAN 00-35, MIL-STD810E



TCIBCH HD Series MWIR thermal cameras



Type: MWIR 1280x720 CMT detector

Spectral range: 3,7-4,95 μ m.

Pixel pitch: 12 μ m.

NUC: Built-in reference/quadratic NUC

FOV: 11x6,2-0,9x0,5°

Continuous optical zoom: 80-960mm.

E-Zoom: Interpolated (up to 8X)

Analogue video: PAL/NTSC

Digital video: Ethernet, HD-SDI

Platform: Onvif

Dynamic range enhancement: L.E.E.

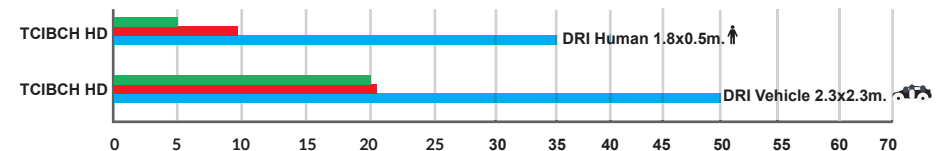
Image stabilization: Yes

Turbulence mitigation: Yes

Autofocus: Yes

MTBF: Long life linear 22,200 hours

Waterproof: IP66 according to MIL810





TCIBC825 Series MWIR thermal cameras

Type: 640 x 512 XBn FPA (HOT InSb)
 Spectral range: 3.6 to 4.2 μm
 Sensitivity: 23mK.
 Pixel pitch: 15 μm .
 NUC: Built-in optical NUC
 FOV: 0.66°(H)x0.53°(V) to 13.7° (H)x11.0°(V)
 Continuous optical zoom: 40–825mm.
 Automatic or Manual focus (remote)
 Selectable FOV: 4 points
 Analog (NTSC / PAL) and digital, Ethernet (H264, ONVIF)
 Image stabilization: Yes
 MTBF: Long life linear 20,200 hours
 20Km. Laser Range Finder, Class 1 Eyesafe
 GPS
 Digital magnetic compass
 Hardware multitracker
 Waterproof: IP66 according to MIL810
 Several positioning systems available

THALR Long range surveillance cameras

2 megapixel Long range D/N camera
 1/2,3" Super low light sensor
 20-750mm. continuous zoom
 x2 extender 40/1500mm.
 x16 digital zoom
 Autofocus
 Ethernet, analogue video out
 H.264, MJPEG, Onvif
 50dB. signal ratio
 Up to 30fps. in 1080p.
 Waterproof: IP66 according to MIL810

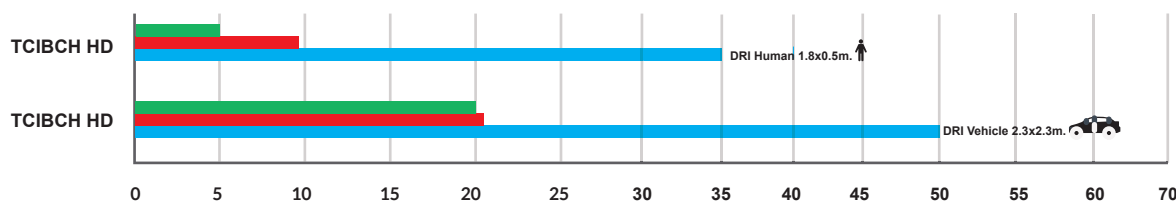
TCIBC Series	TCIBC330	TCIBC460	TCIBC660	TCIBC825
Lens	15-330mm.	25-460mm.	30-660mm.	40-825mm.
FOV (HxV)	1,66x1,33/35,5x28,7°	1,19x0,95/21,7x17,5°	0,83x0,66/18,2x18,6°	0,66x0,53/13,7x11°
IFOV	0,0453-0,99mrad.	0,0325-0,59mrad.	0,0226-0,49mrad	0,0180-0,37mrad.
Sensitivity	23mK.	23mK.	23mK.	23mK.
Weight	10Kg.	11Kg.	12Kg.	13Kg.
Size	520x220x210mm.	530x240x230mm.	540x250x240mm.	550x250x240mm.



Multi-sensor Stationary Long range

Type: MWIR 1280x720 Indium Antimonide (InSb)
 Spectral range: 3,7-4,95µm.
 Pixel pitch: 12µm.
 NUC: Built-in reference/quadratic NUC
 80-960mm. continuous zoom, autofocus
 FOV: 11°x6.2° to 0.92°x0.52°
 E-Zoom: Interpolated (up to 8X)
 Video: Digital, PAL/NTSC
 Platform: Onvif compatible
 Image stabilization: Yes
 Gyro stabilized gimbal
 Turbulence mitigation: Yes
 Video tracker, hardware
 Linear Dynamic range enhancement
 Image processing Tunable Digital Detail Enhancement (DDE)
 Histogram Equalization
 3 FOV adjustment
 25Km. laser range finder
 10Km. Laser illuminator 810nm. with collimator 0,5-25°
 MTBF: Long life linear 35,000 hours
 Waterproof: IP67 gimbal according to MIL810
 Front panel wiper
 TCP/IP Fiber interface video and management connection
 Integration libraries for radar systems
 Optional Kongsberg map engine integration

Long range Low light Color Camera in 2mp. resolution
 20-2200mm continuous zoom
 Min illumination 0,005 Lux/F.1,4
 FOV: 0,25-26°
 Optical Zoom 110x / 10x digital with 2-optical extender
 Gain 0-72dB.
 EIS optional
 Back light compensation
 Video output: Digital,analogue



Parameters: Pixel pitch = 12µm.
 STANAG 4347
 50% detection probability
 Human target – 1.8x0.5m, 2°K
 Vehicle – 2.3x2.3m, 2°K
 Sigma = 0.2/82% transmission



Multi-sensor Stationary Long Range

Type: MWIR 640x480 Indium Antimonide (InSb)

Spectral range: 3,7-4,95µm.

Pixel pitch: 15µm.

NUC: Built-in reference/quadratic NUC

Continuous zoom, autofocus

FOV: 0.66°- 14°

Video: Digital, PAL/NTSC

MTBF: 35,000 hours

Platform: Onvif compatible

Image stabilization: Yes

Turbulence mitigation: Yes

Video tracker, hardware

Linear Dynamic range enhancement

Image processing Tunable Digital Detail Enhancement (DDE)

100-25,000m. laser range finder, class 1 Eyesafe

10Km. Laser illuminator 810nm. with collimator 0,5-25°

Waterproof: IP67 gimbal according to MIL810

Pan-tilt unit 360° continuous, tilt -25° to 70°

Gyro stabilized gimbal

Long range Low light Color Camera in 2mp. resolution

Focal length 1000mm. (with e-extender 2000mm.)

FOV 0,5° - 25°

50-100X continuous zoom

Min illumination 0,005 Lux/F.1,4

Optical Zoom 110x / 10x digital with 2-optical extender

Gain 0-72dB.

EIS optional

Back light compensation

Video output: Digital,analogue



TF300 Multi-sensor Long Range Marine Gimbal

Type: MWIR 640x480 Indium Antimonide (InSb)

Spectral range: 3,7-4,95µm.

Pixel pitch: 15µm.

IR lens 18-275mm. lens

D/N HD 1920x1080 resolution 30X. lens

Sensor spotter 1920x1080 resolution 750mm.

4 stabilized active axis / 6 pasive axis gimbal

100mW LP optional

All sensors continuous zoom lenses

All sensors simultaneously available

Internal IMU and GPS for accurate GEO functions

Auto tracker Slew-to-cue with radar detection

Real time on-board image processing

ITAR free



TCIDPR20LRP Multi-sensor Stationary Long range

Type: MWIR 640x512 MCT
Spectral range: 3,7-4,8 μ m.
Pixel pitch: 15 μ m.
<23mK. NETD sensitivity
20X Thermal continuous zoom
30X DN continuous zoom
1.3 megapixel 1/2,8" Day/Night zoom camera
Laser Range Finder for 20Km.
GPS heading and positioning
Command and control unit platform to manage cameras and moving maps
Object tracking / Auto tracker
2 Axis high performance gyro stabilization
MIL-STD for environmental conditions / IP67

Pressurized housing with nitrogen gas
Rugged industrial PC for management
Joystick console for management
Dual monitors display
All lenses protected against salt contact

TCIDDC330LRP Multi-sensor Stationary Long range



* Available models in LWIR + Day/Night camera or
Day/Night cameras + 3Km. spotter light



Type: MWIR Cooled XBn FPA (HOT InSb) sensor
640x512 resolution
Spectral range 3.6-4.2 μ m.
Pixel pitch 15 μ m. pixel pitch
<23mK. NETD sensitivity
15-330mm. / FOV 35.5°-1.66° Thermal continuous zoom
2 megapixel high performance Day/Night zoom camera
30-750mm. / FOV 24.8°-0.55° Day/Night continuous zoom
Omnidirectional pulse compression marine radar for vessel detection
True 48nm range with 3-foot open array antenna
Digital video stabilization
Object tracking
Slew to cue tracking with radar integration
2 Axis high performance gyro stabilization
MIL-STD for environmental conditions IP67
Command and control C2 platform
Rugged industrial PC for management
Joystick console for management
Dual monitor display



THALR A/B Long range surveillance cameras

2 megapixel Long range D/N camera
 High sensitivity 1/1,8" or 1/2,3" CMOS sensor
 Video output: H.264, MJPEG, HD-SDI, analog
 Sensitivity: Color 0,1 or 0,005 Lux
 Signal noise: >50dB.
 Up to 60fps./1080p. (No WDR)
 Digital zoom: Up to 110x continuous
 Autofocus
 Electronic image stabilization or advanced stabilization
 Tracking and advanced stabilization with multione option
 Network protocols: TCP/IP, IPv4, TFTP, HTTP, RTSP, RTP, UDP
 Waterproof: IP68 according to MIL810
 Onvif compliant

THALR LONG RANGE DAY NIGHT CAMERA SERIES								
Model	THALR2200A	THALR2200B	THALR1000A	THALR1000B	THALR750A	THALR750B	THALR375A	THALR375B
Lens	20-2200mm.	20-2200mm.	20-1000mm.	20-1000mm.	20-750mm.	20-750mm.	15-375mm.	15-375mm.
NFOV	0,18° (0,09°)	0,23° (0,115°)	0,4° (0,2°)	0,5° (0,25°)	0,55° (0,28°)	0,67° (0,34°)	1,1° (0,55°)	1,34° (0,67°)
Zoom	X110	X110	X50	X50	X37,5	X37,5	X25	X25
Ethernet	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Video out*	1,2,3	1,2,3,4	1,2,3	1,2,3,4	1,2,3	1,2,3,4	1,2,3	1,2,3,4
FPS	60	30	60	30	60	30	60	30
ONVIF	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EIS	Yes	Optional	Yes	Optional	Yes	Optional	Yes	Optional
Waterproof	IP68	IP68	IP68	IP68	IP68	IP68	IP68	IP68
Size (mm.)	780x240x200	780x240x200	780x240x200	780x240x200	780x240x200	780x240x200	780x240x200	780x240x200
Weight	16,5Kg.	16,5Kg.	16Kg.	16Kg.	14Kg.	14Kg.	13Kg.	13Kg.

*1/H.264 2/MJPEG 3/Analog 4/HD-SDI

MWIR/SWIR/Long range D/N camera cleaning system

Pressurized water and air jet to clean and dry single/multisensor surveillance systems, specially designed to decrease maintenance cost and to keep always perfect image performance. Suitable for sea and land applications.

2 or more high pressure nozzles, depending multisensor configuration

4 or more EM control valves

20L. higher pressure distilled water reservoir

6L. high pressure air reservoir

230vAC power supply

1,5KW max consumption, while compressor running

Working temp. 0-55°C., suitable for freezing temperature

Weight 20Kg.



MultiOne multisensor control

Multisensor processing control unit for payloads

Onvif and dedicated protocol for video streams

H.264 video encoding for all payloads

MPEG2 TS (H.264+KLV Metadata)

MPEG4/MJPEG

Multiple streams, HD and SD resolutions

Adjustable bit-rate, image quality, fps, resolution

Video stabilization with roll correction

Jitter/Flicker control for high frequency

Video tracking, automatic track re-initialization

Track through image obstacles

Low latency

Video management: PiP, Thermal+D/N blending

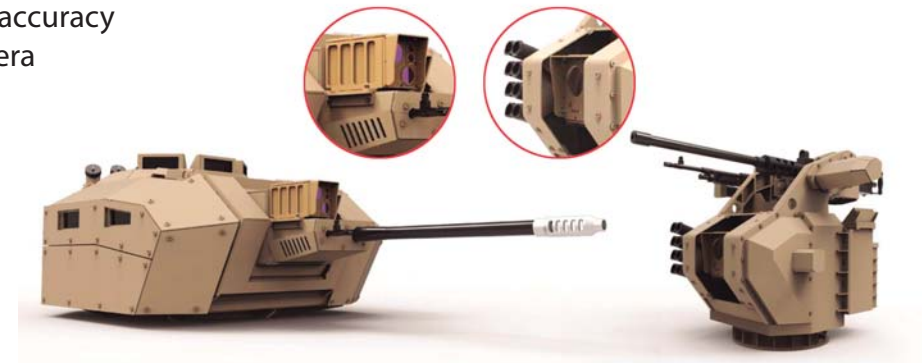
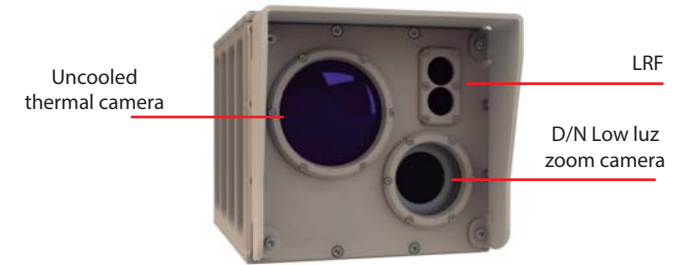
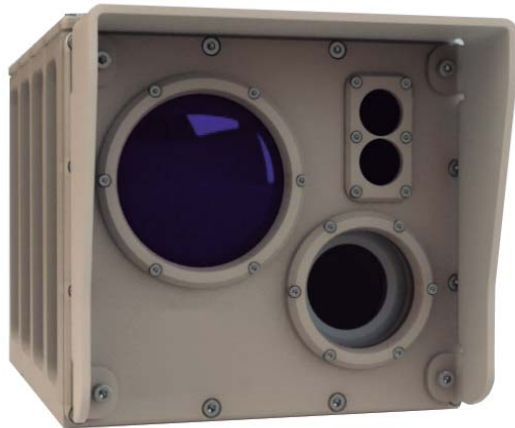
Motion detection, simple track selection mode

Military grade connectors

Waterproof: IP66 according to MIL810

TCIBLW-M LWIR Uncooled RCWS

Type: 640 x 512 or 640x480 Vox or a-Si
Spectral range: 8-14 μm
Sensitivity: <40mK.
Pixel pitch: 17 μm .
Different lens options
2mp. D/N MIL camera
D/N camera FOV 1,7-43°
80-20,000m. LRF, Class 1 Eyesafe $\pm 5\text{m}$. accuracy
Daylight camera 1,7-43° MIL spec camera
Waterproof: IP66 according to MIL810



TCIBSW Long range short wave cameras

Type: 640 x 480 InGaAs PIN-Photodiode
Spectral range: 0,4 to 1,7 μm .
Active pixels: 640x480EIA/640x512CCIR
Pixel pitch: 15 μm .
Shutter mode: Global
FPS: 25/30fps.
Noise: <195 electrones low gain, typical 176
<50 electrones high gain, typical 39
Quantum efficiency: Peak >85%
Video: H.264, MJPEG, RTSP, Onvif, analogue
Digital zoom: 16x

Continuous zoom	TCIBSW750	TCIBSW500	TCIBSW300
Applications	D/N W/O illumination or night with illumination	D/N W/O illumination	D/N W/O illumination
Focal length	20-750mm. F.4,6-7,3	50-500mm. F.5	30-300mm. F2,8-4,5
Spectral range	0,4 to 1,7 μm .	0,4 to 1,7 μm .	0,4 to 1,7 μm .
Size	710x240x200mm.	610x240x200mm.	610x240x200mm.
Weight	7Kg.	7Kg.	7Kg.

TPD01 Stabilized positioning system



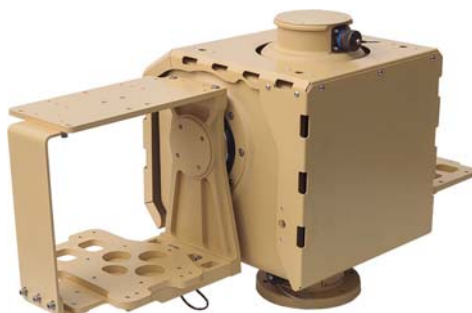
Load capacity/Torque: 6Kg./8Nm.
Material: Aluminum
Waterproof: IP66, optional IP67
Pan range: 360° endless
Pan axis speed: 0,001° - 30°/Sec.
Tilt axis range: -90°/40°
Tilt axis speed: 0,001°-30°/Sec.
Accuracy: 0,05°
No backlash
Dynamic brake
Stabilization $\pm 300\mu\text{RAD}$
Pelco D, Onvif control
Ethernet / Serial communication
GPS/GNSS receiver, optional

TPD02 Positioning system



Load capacity/Torque: 18Kg./15Nm.
Material: Aluminum
Waterproof: IP66, optional IP67
Pan range: 360° endless
Pan axis speed: 0,001° - 45°/Sec.
Tilt axis range: -40°/40°
Tilt axis speed: 0,001°-30°/Sec.
Accuracy: 0,09°
Backlash 0-0,04°
Pelco D, Onvif control
Ethernet / Serial communication

TPD03 Stabilized positioning system



Load capacity/Torque: 30kg.+30kg./60 Nm
Material: Aluminum
Waterproof: IP66, optional IP67
Pan range: 360° endless
Pan axis speed: 0,001° - 90°/Sec.
Tilt axis range: -90°/90°
Tilt axis speed: 0,001°-90°/Sec.
Accuracy: 0,05°
No backlash
Dynamic brake
Stabilization $\pm 300\mu\text{RAD}$
Pelco D, Onvif control
Ethernet / Serial communication
GPS/GNSS receiver, optional
Integrated Ethernet router, optional

TPD04 Stabilized positioning system



Load capacity/Torque: 50kg./60 Nm
Material: Aluminum
Waterproof: IP66, optional IP67
Pan range: 360° endless
Pan axis speed: 0,001° - 125°/Sec.
Tilt axis range: -90°/90°
Tilt axis speed: 0,001°-125°/Sec.
Accuracy: 0,05°
No backlash
Dynamic brake
Stabilization $\pm 300\mu\text{RAD}$
Pelco D, Onvif control
Ethernet / Serial communication
GPS/GNSS receiver, optional
Integrated Ethernet router, optional
Auto levelling



TPD05 Stabilized positioning system

Load capacity/Torque: 35Kg./60Nm.
Material: Aluminum
Waterproof: IP66, optional IP67
Pan range: 360° endless
Pan axis speed: 0,001° - 45°/Sec.
Tilt axis range: -90°/90°
Tilt axis speed: 0,001°-45°/Sec.
Accuracy: 0,02°
No backlash
Dynamic brake
Stabilization $\pm 300\mu\text{RAD}$
Pelco D, Onvif control
Ethernet / Serial communication
GPS/GNSS receiver, optional

TPD06 Positioning system

Load capacity/Torque: 120Kg./300Nm.
Material: Aluminum
Waterproof: IP66
Pan range: 360° endless
Pan axis speed: 0,001° - 10°/Sec.
Tilt axis range: -45°/45°
Tilt axis speed: 0,001°-10°/Sec.
Accuracy: 0,1°
No Backlash
Self lock brake
Pelco D, Onvif control
Ethernet / Serial communication



TPD07 Stabilized positioning system



Load capacity/Torque: 12kg./12 Nm
Material: Aluminum
Waterproof: IP66, optional IP67
Pan range: 360° endless
Pan axis speed: 0,001° - 65°/Sec.
Tilt axis range: -90°/90°
Tilt axis speed: 0,001°-45°/Sec.
Accuracy: 0,02°
No backlash
Stabilization $\pm 300\mu\text{RAD}$
Pelco D, Onvif control
Ethernet / Serial communication
Integrated target tracking algorithm
Integrated true heading and GNSS positioning
18 Ghz. high frequency joints
Precise tracking and geo-positioning



LASER RANGE FINDERS



LDC1 Laser Range Finder

Laser type: Erbium glass
Wavelength: 1,54μm.
Safety: Class 1/ IEC60825-1, ED2 2007-3
Range: 80-20,000m.
Resolution: 5m.
Accuracy: ±10m.
Extinction: 37dB.
Measuring rate: 6pps. continuous, fast measuring
Multiple targets: 1st., 2nd. and last target
Multiple target resolution: 50m.



LDC2 Laser Range Finder

Laser type: Erbium glass
Wavelength: 1,54μm.
Safety: Class 1/ ANSI136.1-2007 / IEC60825-1
Range: 80-20,000m.
Resolution: 5m.
Accuracy: ±10m.
Extinction: 37dB.
Measuring rate: 2pps. continuous
Multiple targets: 1st., 2nd. and last target
Multiple target resolution: 30m.



LDC3 Laser Range Finder

Laser type: Erbium glass
Wavelength: 1,54μm.
Safety: Class 1/ IEC60825-1, ED2 2007-3
Range: 200-20,000m.
Resolution: 1m.
Accuracy: ±5m.
Extinction: 43dB.
Measuring rate: 1pps. continuous
Multiple targets: 1st., 2nd. and last target
Multiple target resolution: 30m.



LDC4 Laser Range Finder

Laser type: Erbium glass
Wavelength: 1,54μm.
Safety: Class 1/ IEC60825-1, ED2 2007-3
Range: 80-10,000m.
Resolution: 1m.
Accuracy: ±5m.
Extinction: 31dB.
Measuring rate: 3pps. continuous, 6pps. burst/30sec.
Multiple targets: 1st., 2nd. and last target
Multiple target resolution: 30m.



LDC5 Laser Range Finder

Laser type: Erbium glass
Wavelength: 1,54μm.
Safety: Class 1/ IEC60825-1, ED2 2007-3
Range: 50-12,000m.
Resolution: 2m.
Accuracy: ±5m.
Extinction: 32dB.
Measuring rate: 3pps. continuous, 6pps. burst/30sec.
Multiple targets: 1st., 2nd. and last target
Multiple target resolution: 30m.

Perimeter security / fence security directional radars

Type: Directional radar for fence/perimeter protection

Frequency band: C, not licences required

Detection distance:

TAM964A-20: 400m. human / 600m. vehicle-RHIB

TAM1000-20: 720m. human / 1000m. vehicle-RHIB

Very low power consumption, solar panel suitable

High resolution

Slew-to-cue function for pan/tilt thermal cameras

Low bandwidth requirement

IP67 waterproof

Management platform included

ONVIF compliant

Alarms integrated with major VMS brands



TAM964A-20



TAM1000-20



*Optional desert ready models

Midrange compact surveillance radar

Type: Wideband coherent Doppler CWLFM

Low probability interception LPI

Frequency band: Ku

Bandwidth: 1Ghz.

±5° elevation control

Instrumental detection range: 5Km.

Coverage area: 78Km²

360° Azimuth coverage

Target: Personnel and vehicles, static or moving

4500m. detection range for human

5000m. detection range for light vehicle

Scan rate: 60 rpm. configurable

Range resolution 0,2-1m. configurable

Range accuracy: 0,05-0,25m.

Gigabit Ethernet, remote operation and management

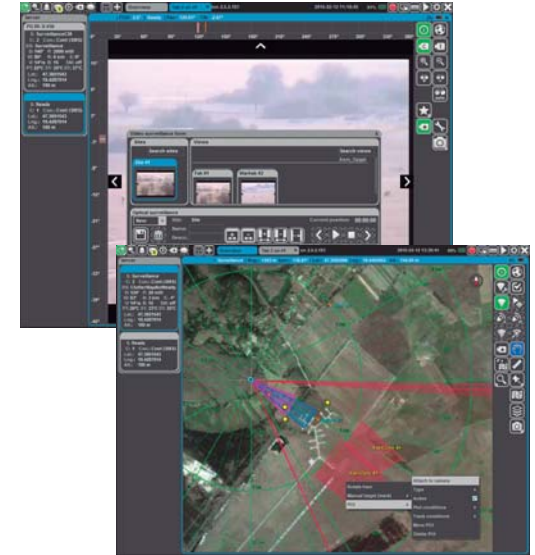


SURVEILLANCE GROUND RADARS AND COASTAL SURVEILLANCE RADARS



Directional ground surveillance radar

Type: FMCW
Frequency band: X (NATO I/J)
Detection: 8Km. human, 10Km. soldier, 15Km. vehicle
Scan rate: 7°-14°/Sec.
Target capacity: 10 plots/Sec.
Integrated GPS and north finding
Low radiated power
10-12 hours on 1 battery set
System weight 30Kg.



Terma SC1002 ground surveillance radar

Type: Solid state technology
Frequency band: Ku
Detection range 3,7Km. human, 7,3Km. vehicle, 12Km. trucks
Instrumental detection range: 48NM.
360° Azimuth coverage
Target: Humans, vehicles, boats, slow or fast moving
Covering area: up to 452Km²
>100 Tracks
Scan rate: 12-60 rpm. configurable
Antenna elevation configurable
Network management



Midrange CS&VTS coastal surveillance radar

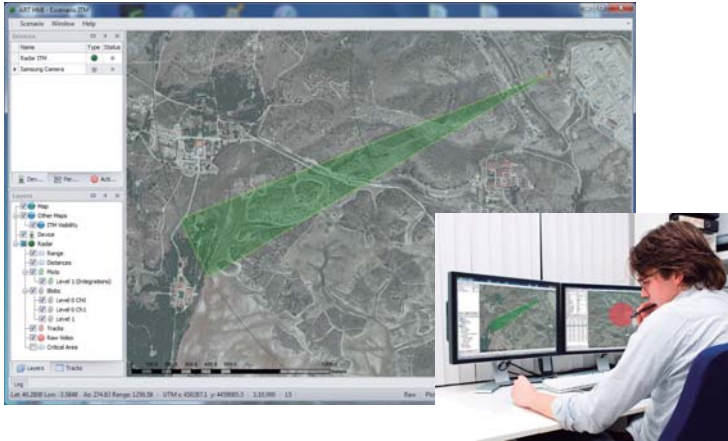
Type: Wideband coherent Doppler CWLFM
Low probability interception LPI
Frequency band: Ku
Bandwidth: 1GHz.
 $\pm 5^\circ$ elevation control
Instrumental detection range: 6 or 12NM.
360° Azimuth coverage
2 nautical miles detection range (RCS:0,5m².)
5 nautical miles detection range (RCS:0,5m².)
Scan rate: 60 rpm. configurable
Range resolution 0,2-1m. configurable
Range accuracy: 0,05-0,25m.
Vessel Traffic Services (VTS)
Inland waterway surveillance
Gigabit Ethernet, remote operation and management



Terma SC2202 marine surveillance radar

Type: 2D fully coherent pulse compression
Frequency band: X
Target tracking, up to 70 Knots
Instrumental detection range: 48NM.
360° Azimuth coverage
Target: Vessels, RHIBS, boats, static or moving
>500 Tracks
Scan rate: 6-48 rpm. configurable
Network management





HMI Multi-Sensor Command & Control Software

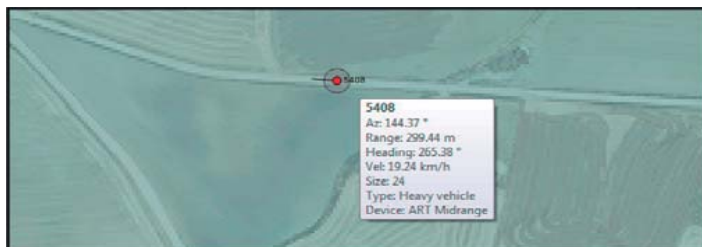
Outstanding situational awareness & reaction capability radar, thermal, daylight camera
 Multi-sensor data fusion
 Runs on conventional desktop PCs
 Integrated high performance Geographic Information System (GIS)
 Modular and scalable architecture
 Automatic slew-to-cue of pan & tilt with Tanz positioning systems
 User definable areas / virtual fences with associated custom behaviors
 EWSUP integration
 "Zero training mode", feature to calibrate and run radar by no trained staff



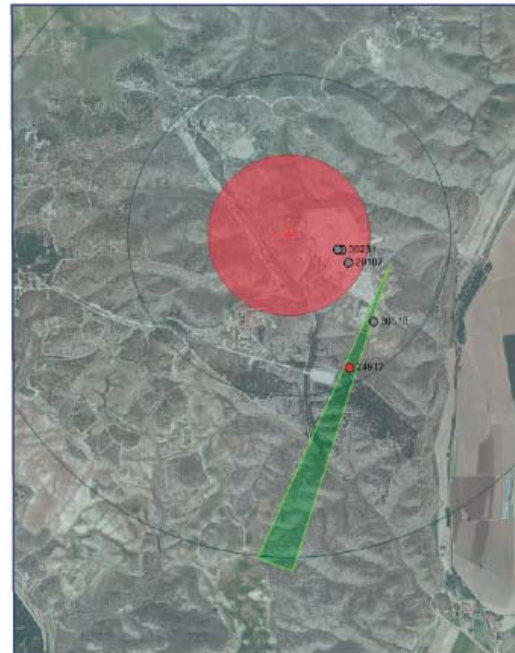
HMI Control software screenshots



Sensor representation: camera field of view (top) and underground sensor coverage (bottom)



Map interaction: intruder information tooltip (top) and contextual menu for threat assessment and camera control (bottom).



Sensor-camera integration: radar detected target automatically tracked by camera

RADAR-EOIR-JAMMER COMMAND AND CONTROL



Slew-to-cue function with Tanz thermal cameras

NETWORK AND ANALOGUE RECORDERS



TDVRL14SD analogue video recorder

Compact design, up to 4 thermal vehicle detectors
Able to record up to D1/120fps.
Recording up to 64Gb. in microSD card
Fully vibration proof and fan-less
3G/4G data transfer optional, GPS antenna for location
9-36v.DC ready
Wide working temperature range
Easy video data collection
Embedded VMS and video player
Analogue video output



TDVRL24SD analogue video recorder

Compact design, up to 4 thermal vehicle detectors
Able to record up to 1080p./120fps.
Recording up to 512Gb. in microSD card
Fully vibration proof and fan-less
3G/4G data transfer optional, GPS antenna for location
9-36v.DC ready
Wide working temperature range
Easy video data collection
Embedded VMS and video player
VGA/Analogue video output



TNVRL18 network video recorder

Intel i7 CPU 8Gb. DDR4 2133MT/s,
8 channels in 1080p.
Fanless-vibration proof system
Recording in SSD, mSATA or HDD
Built-in 8 POE Giga LAN
1 Giga LAN Ethernet connection
Optional 3G/4G and GPS antenna, 8 GPIO
9-36v. DC ready
Wide working temperature range
HDMI/DVI/VGA/DP video output

* Several configuration options



NISE3600 Rugged industrial computer

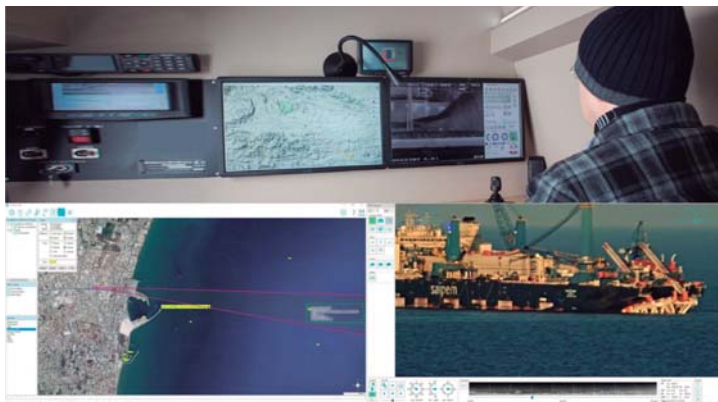
Rugged fanless industrial computer
Intel® Core™ i7-3540M
Double side 512Mx8 (4GB), Op. Temp. 0-85°
1TGB, 2.5" SSD420K, SATA3, MLC, Op. Temp. 0-70°
Win10 IoT Ent LTSB 2016 MultiLang
Supports 3 independent monitors
Designed for heavy duty work
Vibration and high temperature ready



G-ST500+/4M Rugged industrial computer

Rugged fanless industrial computer
Intel® Core™ i3-i5 CPU
Tanz C2 platform preloaded
Vibration proof / working temperature extended
Multiple GIGA LAN
4x POE / Camera ports
Multiple USB3 and USB2 connectors
HDD or SSD recording

C2 COMMAND AND CONTROL PLATFORM



Tanz command and control platform to manage security installations

The software allow real-time monitoring of the pictures from both cameras, day / night and thermal, and according to the mode of operation selected by the operator, a single picture or picture in picture is displayed with the radar targets overlaid on the digital map on a different monitor.

New Tanz C2 **SeaLand** platform to control land-sea and sea-sea systems, now including powerful Kongsberg GIS modules and dynamic map engines to control any moving item and represent it in military or marine cartography having AIS support.



System is able to control different systems connected to the platform, such as:

- Thermal cameras
- Day/Night cameras
- Positioning systems
- LRFs

Supporting data from:

- AIS
- Radar (ARPA)
- GIS



C2 Command and Control platform



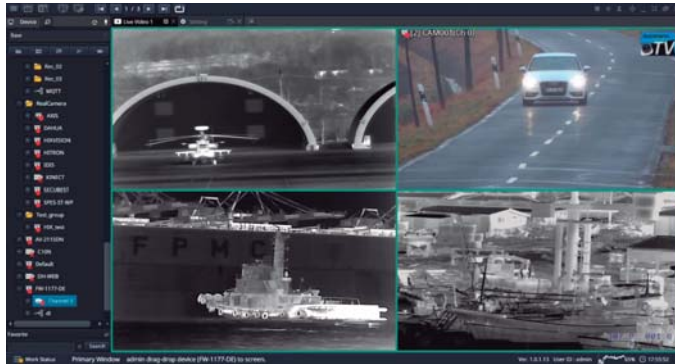
C2 **SeaLand Command and Control platform**



- Multiple layer support
- Different symbols for target types (Person, Vehicle, etc.)
- AIS targets
- Target position and data (observation angle, direction) overlaid on a map
- Target tracking Objects:
 - RHIBs
 - Small objects
 - Vessels
 - People tracking
 - Vehicle tracking
 - UAV, helicopter tracking
- Dynamic camera settings (zoom/focus)

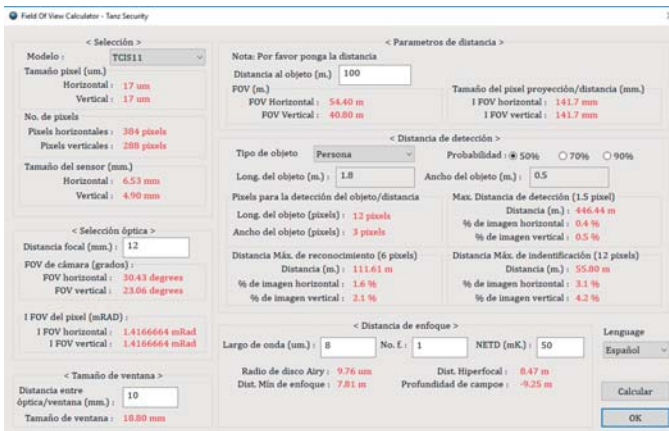
All MWIR, SWIR, Long range day/night cameras and positioning systems are integrated with listed radars

SURVEILLANCE VMS, VIDEO ANALYTICS AND LENS CALCULATOR



Tanz VMS for thermal and network camera management

Tanz thermal cameras include a powerful server-client VMS for thermal and network camera control
Onvif support VMS
PTZ control for thermal positioning systems and network PTZ cameras
High performance system and high definition recording
Windows base system
VMS able to handle over 1000 channels in up to 4K definition
Including TV wall capability



Field Of View Calculator - Tanz Security

< Selección >

Modelo: TCIS11

Tamaño píxel (um):
Horizontal: 17 um
Vertical: 17 um

No. de píxeles:
Píxeles horizontales: 304 píxeles
Píxeles verticales: 288 píxeles

Tamaño del sensor (mm):
Horizontal: 6.53 mm
Vertical: 4.90 mm

< Selección óptica >

Distancia focal (mm.): 12

FOV de cámara (grados):
FOV horizontal: 30.43 degrees
FOV vertical: 23.06 degrees

I FOV del píxel (mRAD):
I FOV horizontal: 1.4166664 mRad
I FOV vertical: 1.4166664 mRad

< Tamaño de ventana >

Distancia entre óptica/ventana (mm.): 10

Tamaño de ventana: 10.80 mm

< Parametros de distancia >

Nota: Por favor ponga la distancia

Distancia al objeto (m.): 100

FOV [m]:
FOV Horizontal: 54.40 m
FOV Vertical: 40.80 m

Tamaño del píxel proyección/distancia (mm):
I FOV horizontal: 141.7 mm
I FOV vertical: 141.7 mm

< Distancia de detección >

Tipo de objeto: Persona

Probabilidad: 50% 70% 90%

Long. del objeto (m.): 1.8

Ancho del objeto (m.): 0.5

Píxeles para la detección del objeto/distancia

Long. del objeto (píxeles): 12 píxeles

Ancho del objeto (píxeles): 3 píxeles

Max. Distancia de detección (1.5 píxel)

Distancia (m.): 446.44 m

% de imagen horizontal: 0.4 %

% de imagen vertical: 0.5 %

Distancia Máx. de reconocimiento (6 píxeles)

Distancia (m.): 111.61 m

% de imagen horizontal: 1.6 %

% de imagen vertical: 2.1 %

Distancia Máx. de indentificación (12 píxeles)

Distancia (m.): 55.80 m

% de imagen horizontal: 3.1 %

% de imagen vertical: 4.2 %

< Distancia de enfoque >

Largo de onda (um.): 8

No. f.: 1

NETD (mK): 50

Radio de disco Airy: 9.76 um

Dist. Min. de enfoque: 7.81 m

Dist. Hiperfocal: 8.47 m

Profundidad de campo: -0.25 m

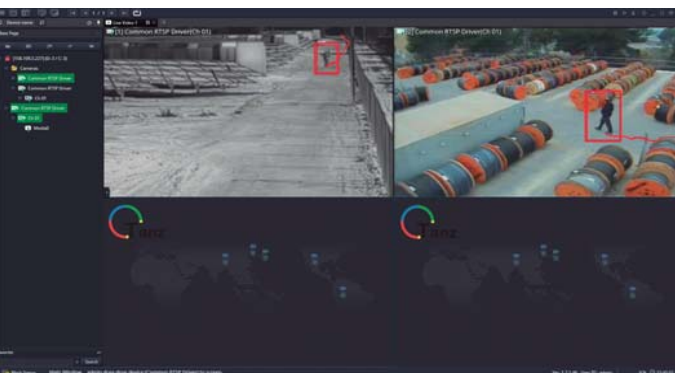
Language: Español

Calcular

OK

FOV calculator for thermal cameras

Tanz FOV calculator helps to user to understand the visual range of lenses in thermal cameras
Supporting all Tanz thermal cameras and available lenses
Accurate information data for DRI (Detection, recognition, identification)
Probability data for 50/70/90% following NATO standard
Different object dimension selection



Advanced video analysis for thermal and network cameras

Tanz provides different professional video analysis for thermal cameras
Analytic software with dedicated algorithms for thermal cameras
Windows base analytics for high performance and low false alarm ration
Proven analytics in several demanding installations
iLIDS certified by UK Government



LENS DETECTION / RECOGNITION / IDENTIFICATION RANGE DISTANCES FOR LWIR SYSTEMS & RADARS

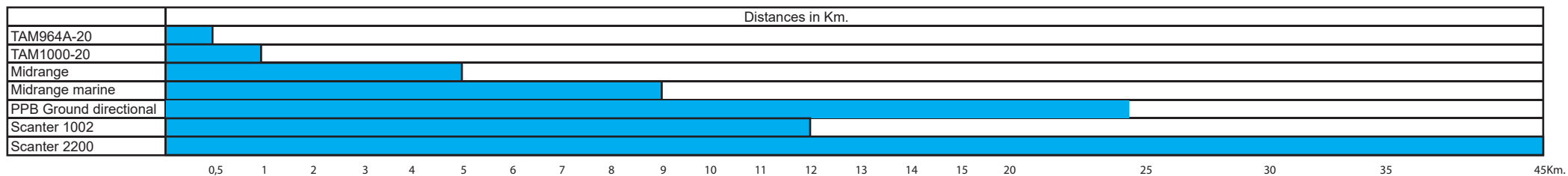


Performance may vary based on environmental conditions, topography, monitor setup, operator experience, camera settings, and camera configuration.

* Not suitable lenses for 1024x768 resolution.

** TCID1 Camera series max. focal length 50mm.

■ Identification Human size 1.8x0.5m.
■ Recognition Vehicle size 2.3x2.3m.
■ Detection Probability: 50%





Distributed by:

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